

DOCKET NO.: FCI-2552/C2757**PATENT**

22. The modular mezzanine connector system of claim 19, wherein the plug assembly further comprises a plurality of plug contacts disposed in a row with each contact oriented perpendicular to a ground plane and the receptacle assembly further comprises a plurality of receptacle contacts disposed in a row perpendicular to a ground plane.

*Cont
Sub B*

Please add new claims 23-34:

23. The modular mezzanine connector system of claim 1, wherein the plurality of plug contacts and receptacle contacts comprise rows of signal and ground contacts disposed in a pattern.

24. The modular mezzanine connector system of claim 23, wherein each plug ground contact comprises a first lateral side and a second lateral side and wherein the receptacle ground contacts within a row alternate mating with the first lateral side and the second lateral side of a ground plug contact.

25. The modular mezzanine style connector of claim 1, wherein the receptacle contact assembly further comprises a support member and the receptacle further comprises a member that runs along a midplane through the receptacle, the receptacle member having a groove so that the support member is inserted into the grooves in order to center align the receptacle contact assembly.

26 26. The modular mezzanine connector system of claim 1, wherein the receptacle contact assembly comprises at least one row of individual contact beams that are disposed in a ground, signal, signal, ground pattern, and wherein the plug contact assembly comprises at least one row of individual contact beams disposed in a ground, signal, ground pattern, and wherein each adjacent two receptacle signal contact beams mate with one plug signal contact beam.

27 27. The method of claim 10, wherein coupling the plug cover to the receptacle cover and thereby placing the plurality of plug contacts into electrical communication with the plurality of receptacle contacts comprises mating each ground receptacle contact in an alternating pattern with each plug ground contact such that every other receptacle ground contact within a row of receptacle contacts mates with a first lateral side of a plug ground contact and the other receptacle contacts with the row of receptacle contacts mate with a second lateral side of a plug ground contact.

28 28. The method of claim 10, further comprising inserting a support member of the receptacle contact assembly into a groove of a member that extends along a midplane of the receptacle cover to thereby center align the receptacle contacts.

29 29. The modular mezzanine style connector of claim 19, wherein the
receptacle assembly further comprises a receptacle cover having a member that extends along a
midplane of the receptacle assembly and that has a plurality of grooves that receive a support
member of a contact assembly in order to center align each contact assembly.

30 30. The modular mezzanine style connector of claim 19, wherein the
receptacle assembly further comprises a receptacle contact assembly comprising at least one row
of individual contact beams that are disposed in a ground, signal, signal, ground pattern, and
wherein the plug assembly further comprises a plug contact assembly comprising at least one
row of individual contact beams disposed in a ground, signal, ground pattern, and wherein each
adjacent two receptacle signal contact beams mate with one plug signal contact.

31 31. An electrical connector, comprising
a plurality of individual contacts comprising ground and signal contacts;
a base comprising a plurality of diamond shaped pockets, each pocket
comprising a recess through which a portion of one of the contacts can extend into a pocket such
that there is gap around the entire periphery of the contact portion;
a fusible element being disposed in the gap around each contact portion;
and
a cover coupled to the base.

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32. The electrical connector of claim 31, wherein the recess comprises a rectangle that is oriented such that each corner of the diamond shaped pocket is disposed along a line that bisects one of the sides of the rectangular recess.

33. An electrical connector system, comprising:

(a) a plug assembly, comprising

(a₁) a first common base comprising a plurality of fusible elements which are each disposed within a pocket defined within the first common base;

(a₂) a plug contact assembly mounted within the plug assembly comprising a plurality of individual ground and signal plug contacts, each plug contact comprising an end which is secured to one of the fusible elements within one of the pockets of the first common base;

(a₃) a plug cover coupled to the first common base;

(b) a receptacle assembly that mates with the plug assembly, comprising

(b₁) a second common base comprising a plurality of fusible elements which are each disposed within a pocket disposed within the second common base and wherein the first common base and the second common base are substantially identical;

(b₂) a receptacle contact assembly mounted within the receptacle assembly comprising a plurality of individual ground and signal receptacle contacts;

each receptacle contact comprising an end which is secured to one of the fusible elements within one of the pockets of the second common base, each receptacle signal contact mating one of the individual plug signal contacts and each receptacle ground contact mating one of the individual plug ground contacts;

(b₃) a receptacle cover that is coupled to the second common base and that mates with the plug cover

34 34. The connector system of claim 33, wherein the individual receptacle contacts are disposed in rows with each row having contact beams disposed in a ground, signal, signal, ground pattern.